

# Rocco Casagrande, Ph.D.

Managing Director  
Gryphon Scientific

Citizenship: USA

---

## EDUCATION

B.A., Cornell University,  
Chemistry and Biology  
(magna cum laude)

Ph.D., Massachusetts Institute  
of Technology, Biology

## EXPERIENCE

Gryphon Scientific LLC  
(2005 - Present)

Abt Associates Inc.  
(2003 - 2005)

United Nations  
(2002-2003)

Surface Logix  
(2001-2002)

---

## SUMMARY

Trained as a biochemist, Dr. Casagrande has spent his career combining deep scientific expertise with novel methodologies to tackle the most daunting threats facing the nation. He has analyzed avenues for the possible misuse of advanced biotechnology and recommended means to reduce this risk without hampering scientific or industrial progress. He is currently focused on improving lab safety by generating data to support biorisk management.

## Other Related Professional Experience

2023-present Expert Advisor to the CSIS Bipartisan Alliance on Global Health Security

2021-Present, Member, Standing Committee on Biotechnology Capabilities and National Security Needs, US National Academies of Science Engineering and Medicine.

2021-2022 Member of the Task Force on Synthetic Biology and the Bioeconomy, Schmidt Futures

2018-2022 Expert Advisor to the CSIS Commission on Strengthening America's Health Security

2017 – Present Member, Materials Technical Advisory Committee, US Department of Commerce

## US Patents

- US Patent 7169577: Cell Isolation and Screening Device and Method of Using Same
- US Patent 7285412: Device for Magnetic Immobilization of Cells
- US Patent 4861300: Pool Flotation Device
- US Patent Application 60/374800: Assay Device that Analyzes Absorption, Metabolism, Permeability and/or Toxicity of a Candidate Compound

## SELECTED PUBLICATIONS

- Koblenz, G and **Casagrande, R.** (2023) "Biology is Dangerously Outpacing Policy" *New York Times*, Opinion, Feb 20, 2023.
- **Casagrande, R.** (2022) "Innovations and Best Practices in Biosafety: A Workshop" *Applied Biosafety*, 27 (4) p199-200.
- Dettmann, RA, Ritterson, R, Lauer E and **Casagrande, R.** (2022) "Concepts to Bolster Biorisk Management" *Health Security*, 20 (5) p376-386.
- Berger, K and **Casagrande, R** (2020) "Twentieth Century nonproliferation meets twenty-first century biotechnology" *The NonProliferation Review* 4-6, 27 p541-555.



Kemp, L, Adam, L, Boehm, CR, Breitling, R, **Casagrande, R**, et al (2020) "Bioengineering Horizon Scan 2020," *eLife*, 9, e54489.

**Casagrande, R** and Cerles, AA (2020) "NTI/WEF White Paper on DNA Synthesis Advances the Discussion but Misses the Mark," *Health Security*, 18 (1) p1-2.

Jackson, SS, Sumner, LE, Garnier, CH, Basham C, Sun LT, Simone PL, Gardner DS and **Casagrande RJ** (2019) "The Accelerating Pace of Biotech Democratization," *Nature Biotechnology*, 37, p1403-1412.

Kazmierczak, M, Ritterson, R, Gardner, D, and **Casagrande, R** (2019) "China's Biotechnology Development: The Role of US and Other Foreign Engagement" Report for the US-China Economic and Security Review Commission of the US Congress.

Adams, TG and **Casagrande, R.** (2019) "Modeling the Optimum Prussian Blue Treatment for Acute Radiation Syndrome Following 137Cs Ingestion," *Health Physics*, 116 (1) p88-95.

Kunkler, J, Adams, TG, Manger, M and **Casagrande, R** (2018) "Review of Cases of Occult Radiation Exposure and an Analysis of Time to Diagnosis," *Health Physics*, 115 (2), p 308-312.

Wintle, BC, Boehm, CR, Rhodes, C, Molloy, JC, Millett, P, Adam, L, Breitling, R, Carlson, R, **Casagrande, R**, et al (2017) "A Transatlantic Perspective on 20 Emerging Issues in Biological Engineering," *eLife* 14, 6.

Ritterson, R and **Casagrande, R.** (2017) "Basic Scholarship in Biosafety is Critically Needed to Reduce Risk of Laboratory Accidents," *mSphere*, 2 (2) p1-5.

Johnson, B and **Casagrande, R.** (2016) "Comparison of International Guidance for Biosafety Regarding Work Conducted at Biosafety Level 3 and Gain of Function Experiments" *Applied Biosafety*, 21 (3) p128-141.

Pei, L, Bar-Yam, S, Byers-Corbin, J, **Casagrande, R.** et al. "Regulatory Frameworks for Synthetic Biology" *Synthetic Biology: Industrial and Environmental Applications*, M. Schmidt, ed, Wiley-Blackwell Publishers, NY, 2012 pp.157-176.

**Casagrande, R** (January 2008) "Homeland Security 2015—Addressing future biological threats while improving biopreparedness today" in *Homeland Security 2015*. Hicks and Associates, eds, Sponsored by the Department of Homeland Security.

**Casagrande, R** (2004) *Biotechnology: The Security Perspective, Emerging Technologies: Recognizing Uncertainty and Assessing Implications, Proceedings from the 4<sup>th</sup> Annual Symposium on Science and Technology Policy*, Massachusetts Institute of Technology, April 12.

**Casagrande, R.** (2002) Technology versus Terror. *Scientific American*, October, pp. 82-87..

**Casagrande, R.** (2001) Bad Blood Between the FDA and Europe. *The Scientist*, 15 (19), 43.

**Casagrande, R.**, Stern, P., Diehn, M, Shamu, S., Osario, M., Zuniga, M., Brown, P. and Ploegh, H. (2000) Degradation of Proteins from the ER of *S. cerevisiae* Requires an Intact Unfolded Protein Response Pathway. *Molecular Cell* 5, 729-735.

Wang, P.J., Chabes, A., **Casagrande, R.**, Tian, X.C., Thelander, L., and Huffaker, T.C. (1997) Rnr4p, a novel ribonucleotide reductase small-subunit protein. *Molecular and Cellular Biology* 17, 6114-21.

